Implementation of SABSOON

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LONG-TERM GOALS

We intend to assist efforts in utilizing the Navy's offshore training facilities for scientific research activities to make the fullest possible use of these installations, with no impact and at no additional cost to the Navy.

This is one of eight U.S. Navy off-shore Platforms in the Atlantic Ocean which support the Beaufort Tactical Aircrew Combat Training System (TACTS) used to train Navy and Marine fighter pilots flying high above them.

OBJECTIVES

We are aiding Skidaway Institute in its efforts to deploy meteorological and oceanographic instrumentation on the offshore platforms. We have been advising them on interfacing to our power and communication systems, and have been coordinating helicopter support.

APPROACH

We are facilitating the implementation of SABSOON by allowing the installation of scientific instrumentation on offshore Navy platforms, and advising Skidaway personnel on how best to interface with our existing equipment without impacting our primary mission of providing a training facility for military service pilots. Our personnel, in particular Jud Gatch with the Navy, and Carl Drawdy with

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our contractor Litton/PRC, have been working closely with Skidaway to ensure that the program moves forward and does not interfere with our existing system. We are also investigating ways to improve the power supply and communications system in support of SABSOON.

WORK COMPLETED

An efficient system for coordinating helicopter support has been established. It provides regular and reliable access to the offshore platforms. Landing privileges have been established at Skidaway, permitting direct access to the platforms from their facility. This location has the advantage of being directly on the water, permitting us to sling loads under the helicopter directly out to the platforms, which also benefits our Navy maintenance efforts. By coordinating all flights we ensure that there is no interference with training exercises on the range.

U.S. Navy F-18 fighters conducting Air Combat Training. (Note the Instrumentation pod on the wingtip)

A power allocation for each tower has been established to permit the science objectives to be met without jeopardizing the Navy mission. We have been upgrading both wind generators and solar cell systems on the towers, and this should further improve the power supply on the platforms.

Skidaway has established their communications system, directly linking them to the offshore platforms, by breaking out of our microwave system at one of the relay sites. Mr. Drawdy was instrumental in coordinating this effort. The current setup provides the equivalent of a T1 line in bandwidth to SABSOON over channels separate from our communications. We are evaluating an upgrade to the microwave hardware that will improve reliability during heavy rain and strongly stratified atmospheric conditions. If implemented, this will also improve the reliability of the SABSOON connection.

RESULTS

A Navy/civilian collaboration to utilize a military facility for non-military scientific research purposes is underway. The project is operational and has not been interfering with our primary mission of operating a flight training range. We anticipate continued success.

IMPACT/APPLICATIONS

Full implementation of SABSOON will provide the scientific community, resource managers, and educators with real-time access to the coastal ocean. We feel this will enhance our understanding of the physics of coastal zone and its ecosystem, provide a monitoring system for coastal resources and coastal hazards, and a interactive observational system that can be used by educators to study coastal issues.

RELATED PROJECTS

Other partners in this NOPP-funded effort are Harvey Seim at the Skidaway Institute of Oceanography in Savannah, Georgia and Charlie Barans with the Marine Resources Division of the Department of Marine Resources in South Carolina. Skidaway is the lead institute in SABSOON and is responsible for designing and deploying the instrumentation, communications, and data archiving and distribution systems. Dr. Barans is a fisheries biologist and is using video monitoring to study fisheries in the South Atlantic Bight.